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AUTHOR Townsend, Barbara K.
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ABSTRACT

This report discusses the transfer rate of community college students with A.S. or A.A.S. degrees from vocational or "terminal" programs in Missouri. The study shows that during the 1995-1996 academic year, 6,171 students received an associate degree from a Missouri public two-year college. Of these, 3,169 (51%) earned the A.A. degree and 3,002 (49%) earned an A.S. or A.A.S. Furthermore: (1) 1,585 (26%) of the graduates transferred to a Missouri four-year institution the following year; (2) 41% of the A.A. graduates transferred, compared with 9% of the A.S or A.A.S. graduates; (3) by spring 2000, 61% of the A.A. transfers had received a bachelor's degree, compared with 54% of the A.S. or A.A.S. transfers; and (4) the difference in bachelor's degree attainment was statistically significant; however, the transfers with A.S. and A.A.S. degrees exited Missouri four-year institutions with a higher overall GPA of 3.18, compared with 3.12 for A.A. transfers. The study compares its results to similar studies in Oregon, Florida, Texas, North Carolina, and Washington and discovers that findings from the other states are fairly consistent with Missouri's. Overall, the study shows that graduates from vocational and terminal programs also transfer to four-year institutions and earn better grades on the average than the A.A. graduates. However, the A.S. and A.A.S. transfer are less apt to graduate. The report provides implications for institutional practices and future study. (Contains 12 references.) (MKF)

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B. Townsend

"Terminal" Students Do Transfer[1]

Barbara K. Townsend
University of Missouri-Columbia
townsendb@missouri.edu

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A community college's transfer rate is an important measure of the institution's success in achieving its transfer mission. While there are a variety of ways in which the transfer rate can be determined (Townsend, in press), one way is to examine the transfer rate of associate degree recipients. Typically, this rate is calculated by dividing the number of associate degree recipients in a given academic year by the number of those who transferred during the next academic year.[2] However, when this approach is used, most studies only examine the transfer of Associate of Arts (A.A.) recipients, since the A.A. degree is considered the transfer degree (e.g., Baldwin, 1994; Windham, 2001).

Such an approach undercounts the transfer rates of all associate degree recipients. There is a growing body of literature that demonstrates that applied associate degree recipients (sometimes referred to as "terminal" programs) also transfer to four-year colleges (e.g., Cohen & Ignash, 1994; Prager, 1988). At the national level, a study conducted in 1991 found that over 23% of vocational associate degree recipients in the National Longitudinal Study of the Class of 1980 transferred to a four-year institution, as compared to almost 50% of those with academic associate degrees (Grubb, 1991). The phenomenon of applied degree recipients transferring and completing a baccalaureate needs to be examined at the state level, to determine if there are differences among states in the extent of this phenomenon, and if so, to determine why there are these differences.

In this paper, I will briefly present the results of a state-level study of transfer rates of applied degree recipients in Missouri, and compare the results to a similar study in Oregon. Additionally, I will examine the available information on transfer rates of AA recipients in Florida, Texas, the University of North Carolina system, and Washington.

Transfer Rates of Missouri's Applied Degree Recipients

The transfer rate of all Missouri associate degree recipients was examined to determine the rate and also to determine if the rate differed by type of degree (transfer or

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[1] Presented at the annual meeting of the American Association for Community Colleges, Seattle, WA, April 23, 2002.

[2] As with other methods for calculating transfer rates, this method undercounts the percentage of community college transfers in that only about a third of these transfers complete an associate's degree before transferring. However, tracking the baccalaureate degree completion rate of those who transfer with an associate's degree will yield a higher completion rate than tracking it for all community college transfers since those who transfer after completing the associate degree have a much higher baccalaureate attainment rate than non-degreed transfers (NCES97-266).

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A.A. versus other types of associate degrees). At the time of the study (2001), the Missouri Coordinating Board for Higher Education grouped together the A.S. and A.A.S. recipients in studying transfer rates. While the A.S. is considered "a specialized transfer degree … intended for students interested in transferring into professional programs that have a greater emphasis on science and math" (Missouri Coordinating Board for Higher Education, 2000), it was not possible to identify the number of A.S. and A.A.S. recipients in a given year, so the two were grouped together to represent those who transferred with an associate degree other than the A.A. degree.

The population of this study was all people who received an associate degree from a Missouri public two-year during 1995-96 (N=6,171) and transferred to an academic program at a Missouri four-year college or university during 1996-97 (N=1,585). Among those who received an associate degree, 51.4% (3,169 students) earned the A.A. degree and 48.6% (3,002) earned either the A.S. or the A.A.S. degree. Recipients of these two degrees are henceforth referred to applied associate degree recipients.

Almost 26% (1,585 students) of the 1995-96 associate degree recipients transferred during the following academic year to a Missouri public four-year institution. Forty-one percent (1,309) of A.A. degree holders transferred as compared to 9% (276) of those receiving the A.S. or A.A.S.[3] Among those who transferred, almost 83% had an A.A. degree, whereas almost 17% had an applied associate degree.

Just as the transfer rates of the two groups of degree holders varied, so too did the rate of baccalaureate attainment. The cumulative total of transfers receiving a bachelor's degree by spring 2000 was over 61% (972 students). Almost 63% of those with the transfer degree (822 students) received the baccalaureate as compared to over 54% (150 students) of those with applied degrees.

While there was a statistically significant difference in rate of baccalaureate attainment between the two groups (X^2=6.859, df=1, $p < 0.009$), there was no significance in the exiting grade point average (GPA.) of the two groups of baccalaureate recipients. The exiting baccalaureate GPA of those with transfer degrees was 3.12 as compared with 3.18 of those with applied degrees.

Comparison of Transfer Rates in Missouri and Oregon

A similar study of the transfer rates of A.A. recipients versus applied degreed recipients was conducted in Oregon, although the baccalaureate attainment rates and grade point average upon baccalaureate attainment have not yet been determined.

Almost twice as many people received an associate degree in Missouri during the 1995-96 academic year than in Oregon. There were 3,169 A.A. recipients in Missouri as

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[3] Based upon the associate degree majors of the transferring non-A.A. recipients, it is likely that only the 22 Pre-Engineering majors were A.S. degree recipients.

compared to 1,692 in Oregon. However, Oregon's transfer rate[4] for those A.A. recipients who received their degree from an Oregon public community college during 1995-96 was 55.4%, almost 14% higher than Missouri's rate of 41%.

Also, in Missouri there were 3,002 people who received either the A.S. or the A.A.S. as compared to a total of 2,507 in Oregon: 331 A.S. and 2,176 A.A.S. recipients. As is probably the case in Missouri (See footnote 2), far more Oregon students received the A.A.S. than the A.S. The transfer rate for the Oregon A.S. recipients was 47.7%, while the transfer rate for the Oregon A.A.S. recipients was 5.2%.[5] When these two groups of associate degree recipients are combined, Oregon's transfer rate for its 1995-96 A.S. and A.A.S. recipients was also higher than Missouri's: 10.8% as compared to 9% for Missouri. Of the 158 A.S. recipients who transferred, 152 declared a major, and of the 114 A.A.S. recipients who transferred, 98 declared a major (Oregon University System, Office of Academic Affairs, unpublished data, 2002).

Comparison of Missouri's Transfer Rates to Those in Other States

A few states or university systems within a state routinely examine the transfer rates of associate degree recipients, although the transfer rate of applied degree recipients is not always studied. As permitted by available data, Table 1 provides a comparative look at the number of A.A. degree recipients and the extent of transfer of different kinds of associate degree recipients in five of the states discussed below.

Florida: Florida is exemplary in its tracking of the transfer of A.A. degree recipients. As a researcher within the state system, Windham (2001) examined the transfer of A.A. recipients in Florida between 1994-95 and 1998-99. She found that the percentage of A.A. transfers from the public Florida Community College System to the State University System varied from a high of 62.9% in 1994-95 to a low of 57.5% in 1997-98. In 1996-97 it was 62% (in comparison to 41% of A.A. recipients in Missouri).

Texas: Texas is another state that has been examining transfer rates during the past decade. Statistics for the 1995-96 cohort of associate degree recipients in Texas's public community colleges are not available, but statistics for other cohorts are available. In the 1994-95 cohort of two-year college graduates, over 16% with academic associate degrees transferred after graduation as compared to 4.5% of technical degree recipients (Texas Higher Education Coordinating Board, 1997). Among students who attended a Texas public two-year college during fall 1998 and graduated by summer 1999, over 36% of those in academic programs transferred to a university. Almost 6% of technical program graduates transferred (Texas Higher Education Coordinating Board, 2000).

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[4] Transfer is defined as taking one or more for-credit courses at an Oregon University System institution the following year.

[5] This figure is for A.A.S. degree recipients who transfer to an Oregon University System institution only. It does not include A.A.S. nursing/health-occupations students who transfer to the Oregon Health & Science University and are tracked independently.

Although the cohort years are not exactly the same, it appears that Missouri's rate of transfer among both its A.A. recipients and its applied associate degree recipients is higher than Texas's.

University of North Carolina System: While data about the percentage of transfers by type of degree are not available for North Carolina, the University of North Carolina System has compiled data about five cohort groups of community college transfers into selected University of North Carolina institutions.[6] The percentage of technical degree transfer students in each cohort group ranged from 31% to 35%. The number of these students in each cohort group ranged from a low of 707 in the 1990-92 cohort group to a high of 1110 in the 1993-95 cohort group (*Retention, Graduation, and Persistence Rates*, 1998). The numbers and percentages are much higher than Missouri's, where the percentage of associate degree transfers with an applied degree was 17%, and the number was 276.

Washington: Data collected at the state level for several years indicate that at least 50% of AA recipients transfer within the Washington public four-year college and university system. Additionally, five percent of AAS graduates have transferred each year for the past few years (Loretta Seppanen, personal communication, April 9, 2002).

Comparison of Academic Performance and Baccalaureate Attainment

There is limited evidence regarding the academic performance and baccalaureate attainment rates of those who transfer with an applied associate degree. Findings from studies of Florida community college transfers and transfers to the University of North Carolina System provide some comparative data.

Florida: Florida has examined the performance of community college transfers into the State University System in terms of their mean cumulative grade point average (GPA) and percent graduated during 1994-95. The mean cumulative GPA of those who transferred with the A.A. degree was 2.9 as compared to 3.1 for those who transferred with the A.S. degree. Almost 25% of those who transferred with the A.A. graduated as compared to almost 21% of those with the A.S. (Florida Community College System, 1998). These findings are similar to those in the Missouri study in that applied degree recipients had a higher exiting GPA than did transfer degree recipients, but the degree completion rate of applied degree recipients was lower.

University of North Carolina System: In the University of North Carolina System study referenced above, the persistence of these cohorts to graduation was also traced. The graduation rates varied by cohort and type of associate degree, but for three of the four cohort groups, the percentage of people with the college transfer degree who graduated was seven to nine points higher than the percentage of those with the technical degree. For example, in the 1991-93 cohort 73% of those with the college transfer degree graduated after five years as compared to 64% of those with the technical degree

[6] The following cohorts were tracked: 1990-92, 1991-93, 1992-94, 1993-95, and 1994-96.

(*Retention, Graduation, and Persistence Rates*, 1998). Again, these findings regarding graduation rates are similar to those in the Missouri study.

Implications for Practice

What the Missouri and other studies of transfer rates show us is that applied associate degree recipients do indeed transfer to public community colleges within the same state in which they received their associate degree. The studies also show us that the transfer rate of A.A. recipients as well as applied degree recipients varies by state, with greater variation in the A.A. transfer rate. Additionally, we learn that applied degree recipients do better academically at the four-year level as measured by GPA than do those with a transfer degree. However, applied degree recipients are less apt to graduate than are transfer degree recipients.

Implications for practice are several. One implication is that applied degree recipients should be encouraged to transfer. Their transfer will be facilitated by the development of articulation agreements at the institutional level. For example, in 1999-2000 Missouri's two-year college had developed over 150 technology bachelor's degree articulation agreements with 25 of Missouri's four-year colleges, three four-year Kansas colleges, and one Iowa four-year college. The development of "upside-down" 2+2 programs at the four-year college level would also facilitate the transfer of applied degree holders.

Another implication is the need for institutions and states to include the transfer of applied degree recipients in their calculations of transfer rates. Ignoring their transfer presents an incomplete and inaccurate picture of the extent of transfer of community college students.

Finally, the phrases "terminal education," "terminal programs," and "terminal degrees" need to be eliminated from usage. As this paper illustrates, people in so-called "terminal programs" do indeed transfer and attain the baccalaureate. While only a small percentage of these degree holders transfer immediately after attainment of their associate degree, it is likely that more will transfer in later years as the desire for lifelong learning and the increasing need for educational credentials motivate many more associate degree holders to pursue further education.

Table 1.

Public Community College Associate Degree Recipients Transferring to State Four-Year Colleges the Next Academic Year

State	Associate Degree Recipients	AA Recipients	AS/AAS Degree Recipients	AA Transfers	AS/AAS Degree Transfers
Florida 1995-96/ 1996-97		23,711		14,681 (62% of AA recipients)	
Missouri 1995-96/ 1996-97	6,171	3,169 (51.4%)	3,002 (48.6%)	1,309 (41% of AA recipients)	276 (9% of AS/AAS recipients)
Oregon 1995-96/ 1996-97	4,199	1,692 (40%)	2,176 (60%)	937* (55.4% of AA recipients)*	272* (10.8% of AS/AAS recipients)
Texas 1994-95/ 1996-97				16%+ of AA recipients	4.5% of AAS recipients
Texas 1998-99/ 1999-2000				36%+ in academic programs	Almost 6% in technical programs
Washington 1996-97/ 1997-98				52% of AA recipients	5% of AAS recipients

* Transfer defined as taking one or more courses the following year

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